

Product Safety Data Sheet

21
ELANCO

L-16C

Elanco Products Company - A Division of Eli Lilly and Company - 740 South Atlantic Street - Indianapolis, Indiana 46285

Coban® 45

COBAN® 45 is a tradename for monensin sodium. COBAN 45 is fed to broiler chickens and layer replacement chickens as an aid in the prevention of coccidiosis caused by *Eimeria necatrix*, *E. tenella*, *E. acervulina*, *E. brunetti*, *E. mivati* and *E. maxima*.

I. PHYSICAL AND CHEMICAL PROPERTIES

- A. Active Ingredient
monensin sodium (an ionophore)
- B. Formula of Premix
45 grams of monensin activity (as mycelial monensin sodium) per pound mixed with diluents such as rice hulls, limestone, soybean mill run, and an antidusting agent. Contained in 50 lb bags.
- C. Auto Ignition Temperature
365°F (185°C)
- D. Solubility
Insoluble in water
- E. Normal Physical State, Odor, Appearance
Dark brown powdery meal, somewhat musty odor. Detectable odor of amyl alcohol may also be present.
- F. DOT Classification
Nonregulated
- G. Explosive Limit
No ignition up to 2.0 oz/cu ft
- H. Threshold Limit Value
Not established
- I. pH (aqueous 50/50)
5.7
- J. Flash Point
No ignition up to 150°F (65.6°C)

AF 1304

II. STABILITY AND STORAGE

Store under normal storage conditions. Bags should be stored in a cool, dry place. Product should not be used after the date printed on the bottom of the bag; a dating of 24 months is noted on the bag.

III. UNUSUAL FIRE AND EXPLOSION HAZARDS

Relatively noncombustible; requires continuous ignition source to support flames. Dust explosion potential less than that of various grain dusts tested individually.

IV. FIRE FIGHTING INFORMATION

Extinguish with water. Wear protective clothing.

V. SPILL HANDLING

Sweep or clean with vacuum. Control the dust by use of oils or water during clean-up. Residues may be flushed with water. Follow self-protective measures as indicated under Protective Equipment Requirements.

Large spills due to traffic accidents, etc., should be reported immediately to Elanco Products Company for assistance. Prevent spilled material from flowing on adjacent land or into streams, ponds or lakes.

Emergency Information

In the event an individual has accidentally consumed or has been overly exposed to an Elanco product, follow the first aid procedures set forth in this document. If further information is required, have a physician contact S. M. Chernish, M.D., (317) 261-2586 or, at night, (317) 547-0513. If Dr. Chernish cannot be reached, call I. F. Bennett, M.D., (317) 261-2568 or, at night, (317) 293-0857. In case of a large chemical spill or contamination, call (317) 261-2570 or, at night (317) 261-2000 or Chemtrec (800) 424-9300.

This Product Safety Sheet is principally directed to manufacturers, processors and formulators whose personnel may be exposed to this product. It is intended for use by manufacturers, safety hygiene and medical personnel.

All information contained herein is offered in good faith and with the belief that it is accurate. As of the date of issuance, we are providing all information that we have or are aware of relevant to the foreseeable use or handling of the product. However, in the event of an adverse incident associated with this product, this Safety Sheet is not and is not intended to be a substitute for consultation with appropriately trained personnel.

VI. PROTECTIVE EQUIPMENT REQUIREMENTS

Use NIOSH certified respirator either with replaceable or reusable filter designed for protection against dust of Category D (1). For odor protection use a combination vapor-dust respirator meeting above criteria.

Exposure to all dusts should not exceed 10 mg/M³ (TLV for nuisance dust) by capture and isolation in a bag house (2). Recommended containment practices can be found in the Industrial Ventilation Guide (3). Provide work clothing that is changed and laundered at the workplace. Showers are recommended at the end of work shift if dusty material permeates the work shift clothing or contacts skin or hair.

VII. TOXICOLOGY

A. Ingestion

Rats were given a single oral dose of COBAN 45 Premix and observed for 14 days. This treatment resulted in diarrhea, hypoactivity, and generalized weakness. All surviving animals appeared normal after 8 days. The LD₅₀ of the material was 219 mg per kg of body weight.

B. Eyes

Severe damage occurred when COBAN 45 Premix was placed in the eyes of rabbits. Rinsing the eyes 2 minutes after treatment was completely effective and the eyes appeared normal 72 hours after treatment.

C. Skin

Slight transient irritation was observed when COBAN 45 Premix was applied to the shaved and abraded backs of rabbits for 24 hours. The LD₅₀ was greater than 2 g per kg of body weight.

D. Inhalation

Exposure of rats for one hour per day for 10 days to an atmosphere containing fine particles of monensin sodium, the active ingredient in COBAN 45 Premix, caused toxic effects. COBAN 45 contains 45 grams of monensin activity per pound. This product is formulated with light mineral oil in order to minimize dusting problems and potential exposure.

E. Chronic Exposure

Exposure of rats to a diet containing 25 ppm (1.25 mg/kg/day) of monensin sodium, the active ingredient of COBAN 45 Premix, for 2 years produced no adverse effects.

VIII. FIRST AID/HEALTH

A. Ingestion

If taken orally and the person is alert, induce vomiting by tickling the back of the throat with a finger or blunt instrument. If necessary, give syrup of ipecac:

Children 1 to 5 years	15 ml. (1 tablespoon, 1/2 oz)
Adults and older children	15-30 ml. (2 tablespoons, 1 oz)

Then give at least 10 ounces of water to children and 24 ounces to adults. Make certain vomitus is not inhaled. See a physician if symptoms develop.

B. Eyes

Flush immediately with large amounts of water and seek the immediate care of an eye doctor (ophthalmologist). Failure to rinse the eyes could result in possible damage.

C. Skin

Wash all exposed areas with soap and water. Wash all contaminated clothing before reuse. If symptoms develop, contact a physician.

D. Inhalation

If a person becomes weak, dizzy, acquires a headache, or hyperventilates due to increased breathing effort in a dusty environment where COBAN 45 is used, the person should leave the dusty area immediately and lie down. Call a physician if the symptoms persist.

IX. BAG DISPOSAL

Bags may be burned or buried in accordance with approved safety and environmental standards.

X. LABEL STATEMENTS

Warning: When mixing and handling COBAN 45 Premix, use protective clothing, impervious gloves, and dust mask. Operators should wash thoroughly with soap and water after handling.

IX. REFERENCES

- (1) July, 1978 NIOSH Certified Equipment Guide
- (2) OSHA 1910.1000 Subpart Z
- (3) *Industrial Ventilation Guide*, A Manual of Recommended Practice, 14th Edition, produced by the American Conference of Governmental Industrial Hygienists.

NOTE: This information applies only to COBAN 45 which is sold in the U.S.

MATERIAL SAFETY AND HEALTH DATA SHEET

Essentially similar to form LSH-005-4 (U.S. Department of Labor)



rhône-poulenc inc.

Section 1 NAME & PRODUCT

(a) Rhone-Poulenc, Inc.	EMERGENCY PHONE NO. 24 HOURS (b) 800-424-9300
STREET ADDRESS (c) PO Box 125, Black Horse Lane	DATE (d) 1/7/82
CITY, STATE, ZIP CODE (e) Monmouth Junction, NJ 08852	
CHEMICAL NAME, TRADE NAME, AND SYNONYMS (f) D,L-Methionine; 2-Amino-4-(methylthio)butyric acid CAS 59-51-8	
FORMULA OF PRIMARY COMPONENT(S) (STRUCTURAL) (g) $C_5H_{11}NO_2S$ or $CH_3SCH_2CH_2CH(NH_2)COOH$	

Section 2 INGREDIENTS

	%
D,L-Methionine	> 99.0

Section 3 PHYSICAL DATA

2 Melting Point (°F)	520 (decomposes)	6 SPECIFIC GRAVITY (H ₂ O = 1)	1.340
3 VAPOR PRESSURE (mmHg at 20°C)	---	7 % VOLATILE BY VOLUME	---
4 VAPOR DENSITY (air = 1)	---	8 COLOR AND ODOR	White/faint
5 SOLUBILITY IN WATER	Slightly soluble	9 PHYSICAL STATE	Solid (crystalline powder)

Section 4 FIRE AND EXPLOSION HAZARD DATA

10 FLASH POINT (AND METHOD USED) NA °F ---	11 FLAMMABLE L M TS STP L.F.L. --- U.F.L. ---
12 EXTINGUISHING MEDIA <input checked="" type="checkbox"/> WATER FOG <input checked="" type="checkbox"/> FOAM <input type="checkbox"/> ALCOHOL FOAM <input checked="" type="checkbox"/> CO ₂ <input checked="" type="checkbox"/> DRY CHEMICAL <input type="checkbox"/> OTHER	
13 SPECIAL FIRE FIGHTING PROTECTIVE EQUIPMENT Self-contained breathing apparatus	
14 UNUSUAL FIRE AND EXPLOSION HAZARDS None	

Section 5 REACTIVITY DATA

15 STABILITY	NORMAL CONDITIONS	16 CONDITIONS TO AVOID Stable
	FIRE CONDITIONS	
17 INCOMPATIBILITY (Materials to avoid)	<input type="checkbox"/> WATER <input checked="" type="checkbox"/> Mineral ACID <input checked="" type="checkbox"/> Strong BASE <input type="checkbox"/> CORROSIVE <input type="checkbox"/> OXIDIZING MATERIAL <input type="checkbox"/> OTHER:	
18 HAZARDOUS DECOMPOSITION PRODUCTS Hydrogen sulfide, sulfur, nitrogen, and carbon oxides may be emitted on combustion.		
19 HAZARDOUS POLYMERIZATION	MAY OCCUR	20 CONDITIONS TO AVOID
	WILL NOT OCCUR <input checked="" type="checkbox"/>	

(FRONT)

MATERIAL SAFETY AND HEALTH DATA SHEET (cont.)



Section 6 HEALTH HAZARD DATA

- 21 ORAL INGESTION This is a dietary or nutrient supplement for both animals and humans. It is
- 22 EYE CONTACT --- an essential amino acid.
- 23 SKIN CONTACT ---
- 24 SKIN ABSORPTION ---
- 25 INHALATION (TLV OR SUGGESTED CONTROL FIGURE) TLV not established
- 26 EFFECTS FROM INHALATION OVER EXPOSURE ---

- 27 FIRST AID PROCEDURES
- EYE: Flush eyes thoroughly with large volumes of water. Seek medical assistance as necessary, especially if irritation develops or persists.
- SKIN: Wash with soap and a large volume of water.
- INHALATION: Remove from area of exposure. Seek medical assistance as necessary.
- INGESTION: Seek medical assistance as necessary.

Section 7 SPILL OR LEAK PROCEDURES

- 28 STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED Sweep up into a steel drum.
- 29 DISPOSAL METHOD Wash down drain with excess water.

Section 8 SPECIAL PROTECTION INFORMATION

- 30 VENTILATION Provide adequate ventilation. Use local exhaust fans as necessary, especially when working in a closed area.
- 31 RESPIRATORY PROTECTION (SPECIFY TYPE) - Use dust mask under dusting conditions.
- 32 PROTECTIVE CLOTHING Work uniform, gloves (optional)

- 33 EYE PROTECTION
- ☒ NOT NORMALLY NECESSARY ☐ SAFETY GLASSES WITHOUT SIDE SHIELDS ☐ SAFETY GLASSES WITH SIDE SHIELDS ☐ CHEMICAL WORKERS GOGGLES
- ☐ GAS TIGHT GOGGLES OR EQUIVALENT ☐ OTHER:
- 34 OTHER PROTECTIVE EQUIPMENT None

Section 9 SPECIAL PRECAUTIONS OR OTHER COMMENTS

- 35 PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING
- Store in a cool, dry place in tightly closed containers. Avoid prolonged contact with eyes. Wash hands thoroughly after handling. Avoid breathing large quantities of dusts or prolonged periods of time. Do not eat, drink, or smoke in the work area.
- 36 OTHER PRECAUTIONS

**TERRA CHEMICALS INTERNATIONAL, INC.**

P.O. Box 1828 • Sioux City, Iowa 51102 • 712-277-1340

November 23, 1981

David A. Bossman
AFMA Director of Production
Fay Linden
AFMA Safety Committee Chairman
AFMA
1701 N. Ft. Myer Dr.
Arlington, Virginia 22209

Subj: Safety/Handling Procedures

As requested in your letter of November 6, the following should answer your questions on distribution of our products, feed urea and urea liquor, to feed manufacturers.

1. The chemical name is urea.
 2. The trade name is Terrea-287.
 3. The product is used as a non-protein nitrogen supplement in cattle feed.
 4. No special precautions are needed when handling this product.
 5. The product is harmless. Obviously it isn't a human food and if it gets in ones eyes, it is to be washed out.
 6. There are no regulatory requirements pertaining to this chemical.
-
1. The chemical name is urea liquor.
 2. The trade name is Terrea-71.
 3. The product is used as a non-protein nitrogen cattle feed supplement.
 4. No special precautions are needed when handling this material.
 5. There are no potentially harmful effects. Obviously this is not an eye wash or a food for human consumption.
 6. There are no regulatory requirements pertaining to this chemical.

Sincerely,

Phil V. Whiting
Phil V. Whiting
National Sales Manager
Feed Ingredients

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U.S. DEPARTMENT OF LABOR Occupational Safety and Health Administration	Form Approved OMS No. 44-R1387
MATERIAL SAFETY DATA SHEET	
Required under USDL Safety and Health Regulations for Ship Repairing, Shipbuilding, and Shipbreaking (29 CFR 1915, 1916, 1917)	

SECTION I	
MANUFACTURER'S NAME RACHELLE LABORATORIES, INC.	EMERGENCY TELEPHONE NO. (213) 432-3956
ADDRESS (Number, Street, City, State, and ZIP Code) 700 Henry Ford Ave., Long Beach, CA 90801	
CHEMICAL NAME AND SYNONYMS Sulfamethazine	TRADE NAME AND SYNONYMS Sulfamethazine
CHEMICAL FAMILY Sulfa	FORMULA C ₁₂ H ₁₄ N ₄ O ₂ S

SECTION II - HAZARDOUS INGREDIENTS					
PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS		-	BASE METAL		-
CATALYST		-	ALLOYS		-
VEHICLE		-	METALLIC COATINGS		-
SOLVENTS		-	FILLER METAL PLUS COATING OR CORE FLUX		-
ADDITIVES		-	OTHERS		-
OTHERS		-			-
HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES				%	TLV (Units)
					-
					-
					-
					-

SECTION III - PHYSICAL DATA			
BOILING POINT (°F.)	-	SPECIFIC GRAVITY (H ₂ O=1)	-
VAPOR PRESSURE (mm Hg.)	-	PERCENT, VOLATILE BY VOLUME (%)	-
VAPOR DENSITY (AIR=1)	-	EVAPORATION RATE (_____ =1)	-
SOLUBILITY IN WATER	150 mg in 100 ml of water		
APPEARANCE AND ODOR White and Off-White Powder			

SECTION IV - FIRE AND EXPLOSION HAZARD DATA			
FLASH POINT (Method used)	-	FLAMMABLE LIMITS	Lel _____ Uel _____
EXTINGUISHING MEDIA	-		
SPECIAL FIRE FIGHTING PROCEDURES	-		
UNUSUAL FIRE AND EXPLOSION HAZARDS			
-			

SECTION V - HEALTH HAZARD DATA	
THRESHOLD LIMIT VALUE	
EFFECTS OF OVEREXPOSURE People with a history of allergy, asthma, hay fever or urticaria should avoid contact with this material.	
EMERGENCY AND FIRST AID PROCEDURES The individual should be treated by a physician immediately.	

SECTION VI - REACTIVITY DATA			
STABILITY	UNSTABLE	<input type="checkbox"/>	CONDITIONS TO AVOID
	STABLE	<input checked="" type="checkbox"/>	
INCOMPATIBILITY (Materials to avoid) None			
HAZARDOUS DECOMPOSITION PRODUCTS None			
HAZARDOUS POLYMERIZATION	MAY OCCUR	<input type="checkbox"/>	CONDITIONS TO AVOID
	WILL NOT OCCUR	<input checked="" type="checkbox"/>	

SECTION VII - SPILL OR LEAK PROCEDURES	
STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED Should wear mask and/or respirator, and gloves to avoid excessive contact with skin.	
WASTE DISPOSAL METHOD	

SECTION VIII - SPECIAL PROTECTION INFORMATION			
RESPIRATORY PROTECTION (Specify type) Dust, 3M			
VENTILATION	LOCAL EXHAUST	<input checked="" type="checkbox"/>	SPECIAL
	MECHANICAL (General)	<input type="checkbox"/>	OTHER
PROTECTIVE GLOVES Yes		EYE PROTECTION Yes	
OTHER PROTECTIVE EQUIPMENT None			

SECTION IX - SPECIAL PRECAUTIONS	
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING Avoid unnecessary contact with any part of the body.	
OTHER PRECAUTIONS	

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

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OMB No. 44-R1387

MATERIAL SAFETY DATA SHEET

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Shipbuilding, and Shipbreaking (29 CFR 1915, 1916, 1917)

SECTION I

MANUFACTURER'S NAME Deepwater Chemical Co., Ltd.		EMERGENCY TELEPHONE NO. (714) 751-3522
ADDRESS (Number, Street, City, State, and ZIP Code) P.O. Box 17599, Irvine, CA 92713		
CHEMICAL NAME AND SYNONYMS Potassium Iodide		TRADE NAME AND SYNONYMS Potassium Iodide, 90-10
CHEMICAL FAMILY Inorganic Chemical	FORMULA KI-90%/Ca(C₁₈H₃₅O₂)₂ - 10%	

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS	N/A		BASE METAL	N/A	
CATALYST	N/A		ALLOYS	N/A	
VEHICLE	N/A		METALLIC COATINGS	N/A	
SOLVENTS	N/A		FILLER METAL PLUS COATING OR CORE FLUX	N/A	
ADDITIVES	N/A		OTHERS	N/A	
OTHERS	N/A				
HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES				%	TLV (Units)

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	N/A	SPECIFIC GRAVITY (H ₂ O=3)	N/A
VAPOR PRESSURE (mm Hg.)	N/A	PERCENT, VOLATILE BY VOLUME (%)	N/A
VAPOR DENSITY (AIR=1)	N/A	EVAPORATION RATE (_____=1)	N/A
SOLUBILITY IN WATER	N/A		
APPEARANCE AND ODOR Colorless or white			

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	N/A	FLAMMABLE LIMITS	N/A	Lel	Uel
EXTINGUISHING MEDIA	N/A				
SPECIAL FIRE FIGHTING PROCEDURES	N/A				
UNUSUAL FIRE AND EXPLOSION HAZARDS					
N/A					

SECTION V - HEALTH HAZARD DATA	
THRESHOLD LIMIT VALUE	
EFFECTS OF OVEREXPOSURE Prolonged absorption of iodides may produce "iodism" which is manifested by skin rash, running nose, headache and irritation of mucous membranes. In severe cases the skin may show pimples, boils, redness, black & blue spots, hives and bll.	
EMERGENCY AND FIRST AID PROCEDURES Wash thoroughly after handling. If swallowed induce vomiting and call a physician.	

SECTION VI - REACTIVITY DATA			
STABILITY	UNSTABLE		CONDITIONS TO AVOID Long exposure of KI to air will cause yellowing due to liberation of iodine, and small quantities of KIO ₃ may be formed. Light and moisture accelerate decomposition.
	STABLE		
INCOMPATIBILITY (Materials to avoid) Potassium chlorate, metallic salts, alkaloidal salts, chloral hydrate, tartaric and other acids, calomel			
HAZARDOUS DECOMPOSITION PRODUCTS Iodine (corrosive)			
HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES	
STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED Sweep up with ordinary broom and dust pan and deposit in suitable container	
WASTE DISPOSAL METHOD	

SECTION VIII - SPECIAL PROTECTION INFORMATION			
RESPIRATORY PROTECTION (Specify type) NONE			
VENTILATION	LOCAL EXHAUST	SPECIAL	
	MECHANICAL (General)	OTHER	
PROTECTIVE GLOVES NONE		EYE PROTECTION NONE	
OTHER PROTECTIVE EQUIPMENT NONE			

SECTION IX - SPECIAL PRECAUTIONS	
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING When heated to decomposition, iodides can emit toxic fumes of iodine and iodine compounds. Thus, store in a light inhibiting container in a cool, dry place.	
OTHER PRECAUTIONS	